

ABSTRACT OF THE DISCLOSURE

A method for killing infectious microbial cells by exposing the microbial cells to endogenous antimicrobial compounds. Activation of the antimicrobials is achieved by addition of low permeability, non-ionic osmolytes to lower ionic strength in body fluids where the antimicrobials have been previously suppressed by alteration of ionic transport (increase in salt concentration). The method can be used to treat cystic fibrosis. Cystic fibrosis causes elevated salt concentrations in the airway surface liquid (ASL) occur due to the impaired chloride transport across the epithelia. Xylitol has been found to be an effective low permeability, non-ionic osmolyte for use in the present invention.